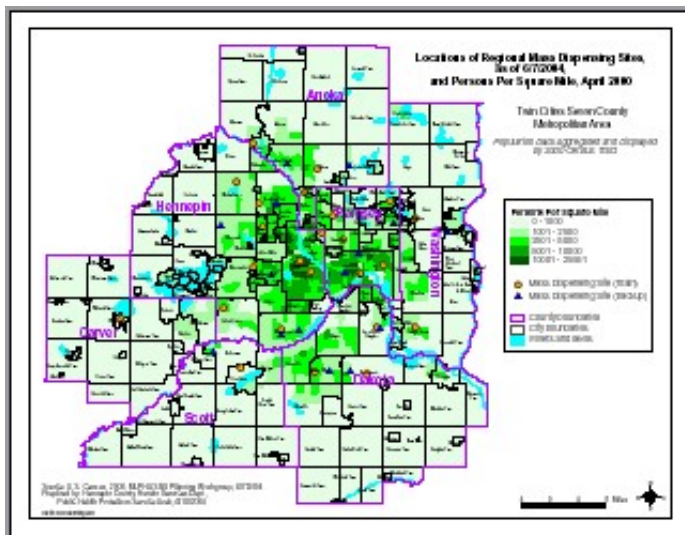


Winter 2005 Department Spotlight: Public Safety Preplanning for Public Health Emergencies

by Barb Schroeder, PHN
Disease Prevention and Control Program Coordinator
Dakota County Public Health Department

During public health emergencies, large groups of people who may have been or may yet be exposed to disease-causing organisms may need preventive therapy (e.g., antibiotics and vaccines) in a short time period to prevent illness. Examples include outbreaks of bacterial meningitis, pandemic influenza, and certain bioterrorism events. In some instances, it is most efficient to provide the preventive therapy at a large dispensing clinic (referred to as a Mass Dispensing Site [MDS] or Point of Dispensing [POD]). MDS planning is underway at the county, regional, state, and federal level. In Dakota County, agreements have been made with each school district to use the public high schools local as Mass Dispensing Sites (MDSs). Twenty-four regional MDSs have been selected to be used for large-scale events affecting the Metro region.

When the decision to activate an MDS is made, the Dakota County Public Health Department (DCPHD) will base the days and hours of operation on the estimated number of persons needing preventive therapy and the timeframe during which they must obtain the preventive therapy. DCPHD will provide this information and the estimated hourly throughput of the MDS to the appropriate public safety agency. The number of people at the MDS and



attempting to reach the MDS at any one time can be highly variable, depending on the size of the population to be served, the hours/days of operation, alternate methods of distributing the preventive therapy, and the level of panic in the community. Local public safety agencies would be responsible for traffic flow, parking, crowd management, and security to support the activities of the MDS.

Regional MDS Sites: Credit Hennepin County Human Services Dept

Geographic Information Systems (GIS) can assist public safety agencies in preparing their plans by providing maps and data about the area around the MDS. After identifying information needs, GIS can quickly develop

detailed information about an MDS and display that data on maps. The maps can indicate roads, traffic signals, parking areas and their capacity, open areas that could be used for auxiliary parking, and any other spatial information that may be required.

GIS activities have included putting together working documents that can be used to estimate an event-size threshold important to public safety agencies. The threshold is the maximum number of people served without putting a plan in action. These documents include population information for the school service area (which is typically the maximum number of people that an MDS will serve) and information about the largest event typically hosted by a particular site (like a football game or a graduation). The documents also estimate the total parking available at the MDS and show detailed maps of the area for traffic flow planning.

From these initial products, local public safety agencies can create plans to be called into action if and when an

event that requires an MDS reaches a predefined magnitude. In preparing these plans, consideration should be given to determining where back-up supply, equipment, and personnel resources can be obtained. It is important to note that nearby jurisdictions may be affected simultaneously, so usual mutual aid sources may not be available.

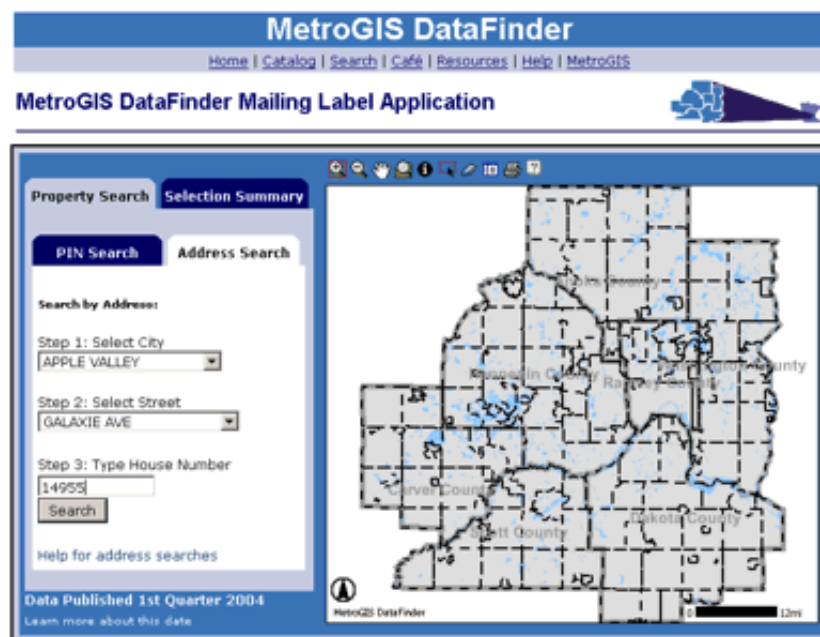
Public Health is investigating other methods of delivering preventive therapy that could supplement or replace MDS activities. Options being investigated include pre-placement or “just-in-time” delivery of antibiotics to facilities and agencies that house or provide service to vulnerable or immobile populations. GIS may provide tools that could assist Public Health in mapping and tracking these activities.

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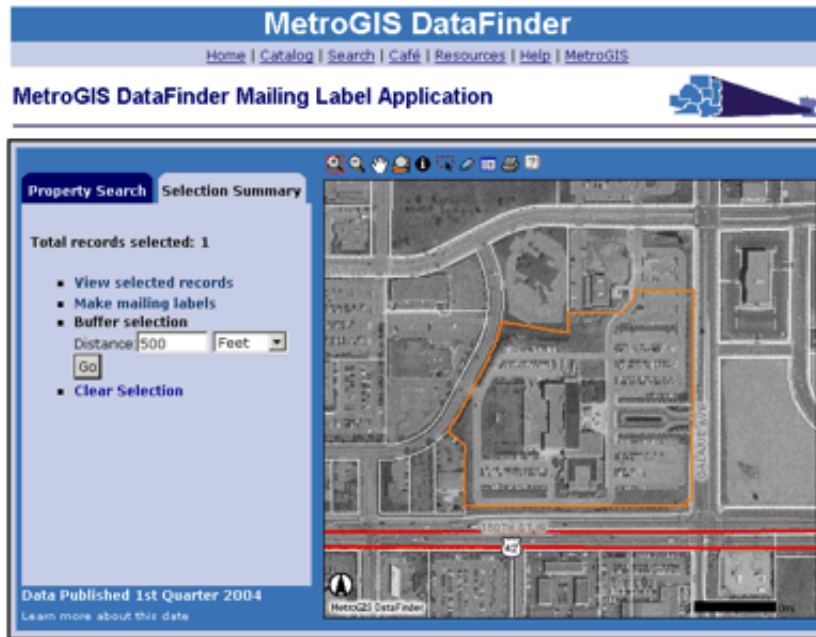
Winter 2005 Desktop GIS: An Introduction to the MetroGIS DataFinder Mailing Label Application

by Scott Laursen

MetroGIS, the Twin Cities metropolitan region's GIS data sharing forum, has added a new mailing label generation application to their DataFinder portal. By using this application, licensed MetroGIS users can generate mailing labels from the parcel datasets for any of the seven metropolitan area counties.



After starting the application, users can choose to search for a property either by PIN or by property address. If the property is found, the application zooms in to it and displays the parcel boundaries, streets, and an aerial photo in the background. At this point, the user can either manually choose additional properties for the mailing label list, or can create a buffer to select properties within a certain radius of the property in question. It is also possible to buffer around multiple properties by manually selecting the base properties and then creating a buffer around them.



After creating the buffer, the user then selects "Make mailing labels" to start up the Mailing Label Wizard. The Wizard first prompts the user to select what type of address they want to use (Owner, Taxpayer, or Property). Next, the user is allowed to review the list of addresses and manually add or remove properties from the list. (This helps prevent the creation of duplicate mailing labels.) The final step is to determine the type of labels to be generated. When finished, the Wizard produces a PDF document containing the mailing labels.

CITY OF APPLE VALLEY 14200 CEDAR AVE S APPLE VALLEY MN 55124-8545	FISCHER REALTY LLC 14698 GALAXIE AVE APPLE VALLEY MN 55124-8574	VALLEY REAL ESTATE LLC 1055 WAYZATA BLVD E SUITE 219 WAYZATA MN 55391-1865
APPLE VALLEY HEALTH CARE CENTER 14650 GARRETT AVE SAINT PAUL MN 55124-8499	CITY OF APPLE VALLEY 14200 CEDAR AVE SAINT PAUL MN 55124-8545	HENRY W ANDERSON MORTUARY INC 3640 23RD AVE S MINNEAPOLIS MN 55407-3079
FISCHER MARKET PLACE LLP 14698 GALAXIE AVE APPLE VALLEY MN 55124-8574	B & G REALTY INC 250 WISCONSIN AVE E LEGAL DEPT SUITE 1750 MILWAUKEE WI 53202-4232	A V DEVELOPMENT 3000 COUNTY RD 42 W BURNSVILLE MN 55337-4824
PRINCIPAL LIFE INSURANCE CO ASSET MGMT RESA 185 711 HIGH ST DES MOINES IA 50392-1370	FRANKE ENTERPRISES LLP 12803 FLORIDA LN APPLE VALLEY MN 55124-5335	COUNTY OF DAKOTA % TREASURER-AUDITOR 1590 HWY 55 HASTINGS MN 55033-2343
AV COMMONS II LLP 3000 COUNTY RD 42 W STE 300 BURNSVILLE MN 55337	BOOM BROTHERS 6950 146TH ST W STE 112 APPLE VALLEY MN 55124-8520	JANINA & STEPHANIE LLC 15030 GLAZIER AVE APPLE VALLEY MN 55124-7441
MICHAEL C & SARAH C MARDELL 12918 DENMARK AVE SAINT PAUL MN 55124-8748	PAUL D & JOAN E HEIL 12809 FALCON CT APPLE VALLEY MN 55124-5082	KURT WALTER HANSEN 12101 DOOD RD ROSEMOUNT MN 55068-3255

This document can be downloaded, saved, and then printed by the user.

There are a few minor drawbacks to the application. Currently, the most recent parcel datasets that are available for use are from the first quarter of 2004, so users will not be able to generate labels for newer developments. Also, the application is not available to the general public. It is password protected and is only available to users who have signed the parcel dataset license agreement. These minor issues should not stand in the way of giving it a try, however. Dakota County users who are interested in checking it out should contact the Office of GIS for assistance.

Winter 2005 GIS 101: What is Pictometry?

by Joe Sapletal

Dakota County, in cooperation with most of the cities, plans to purchase oblique aerial photography from Pictometry in 2005. "Pictometry is a unique patented information system that combines aerial imaging with a state-of-the-art software system that has the ability to provide Visual Intelligence™ unlike any other system available. While Pictometry libraries contain orthogonal (straight down) images like ordinary aerial imaging, over 80% of Pictometry's images are oblique (taken from angles) so that features can be easily seen in their entirety." - *Pictometry.com*



Orthogonal image of Dakota County ADC



Oblique image of a house

What does this mean?

This means that by the summer of 2005 Dakota County Users Group members will have access to a vast amount of aerial photography using Pictometry's Electronic Field Study software, ArcGIS and ArcIMS (web mapper) applications. When it has all been collected it will total 200 Gigabytes of high-resolution imagery. We will be working closely with the Information Technology Department as well as I.T. professionals in the partner organizations so that this isn't a surprise or a burden when the data arrives.

What can we do with it?

Users can "...quickly and easily access up to 12 different views of any property, building, highway, or other landmark or feature in a county. Using Pictometry you get precise geographic coordinates of every pixel, as well as the ability to measure distances, heights, perimeters, lengths, widths, and areas of objects within images. The entire system is designed to balance powerful tools with ease of use, resulting in a system that can deliver exceptional amounts of useful information after only minutes of training." - *Pictometry.com*

How does this compare to other aerial photography?

Pictometry captures oblique imagery at two levels of resolution - "Community" (one and a half foot/pixel) and "Neighborhood" (six inches/pixel). Oblique digital imagery is not a typical mapping product and does not conform to typical mapping accuracy standards; however, we expect it to be sufficient for many applications. We will be able to integrate specific GIS layers, such as parcels, with the oblique imagery in the Pictometry software. We will also be able to access the oblique imagery through GIS software currently being used and the Pictometry othophotos will be available in GIS applications in the same way as the variety of other similar imagery has been available.

Oblique images allow you to see the sides of the buildings and homes. This means that it will be easier to recognize buildings, signs, and other features, as well as measure their heights. This will be most helpful to Public Safety, Assessing, and Public Works personnel. For example, law enforcement personnel could get a good look at the neighborhood and a particular home before they arrive to serve a warrant. An Assessor could count and

measure windows, and see what type of siding is on the structure. Public Works personnel can identify signs and measure the heights of signs, trees, and buildings. For many more examples visit the About Us section on the [Pictometry site](#) and register to read the Frequently Asked Questions.

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Winter 2005 Tech Talk: Editing Tools in ArcMap

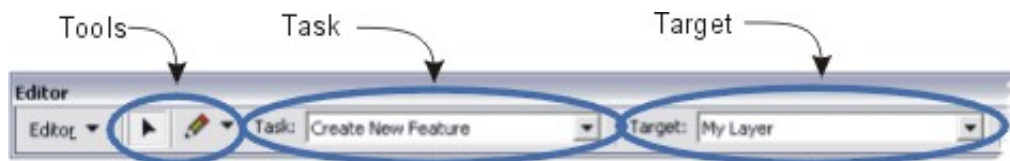
by Matt McGuire

Our new GIS platform at Dakota County, ArcMap, has many different ways to make edits to geographic information. Whether you are creating or editing points, polygons or lines, this article will introduce you to a few of these new editing tools.

First of all, how do we get started editing a new shapefile? One of the most frustrating things about making the switch from ArcView 3.2 to ArcMap 8.x is the indirect method of creating new shapes. However, it doesn't need to be so obtuse. There is a new Dakota County extension that allows you to create a new shapefile in Dakota County coordinates. Just go to File > Dakota County Extensions, open the "Create Shapefile" extension, and click on the new toolbar button. Next, choose a place to store the shapefile. Then choose your geometry type (polyline, polygon, point, or multi-point). A new shapefile will be loaded into your project.

Now that you have your new shapefile, let's talk about how to make edits to it. Whether you are making new shapes or editing existing ones, it's important to remember the three T's - the *tool*, the *task*, and the *target* - of editing. *Tools* define how you will create your sketch. *Tasks* define what your sketch will do when it is complete. Finally, the *target* defines which layer the task will be performed on.

The basic workflow of editing geometry in ArcMap goes as follows. First of all, you have to start editing. To do this, make sure your Editing toolbar is visible (you can find your toolbars in exactly the same way as you would in Word or Excel). Click on the Editor Menu of the Editor Toolbar, and choose Start Editing. Then you create a "sketch". When your sketch is completed it adds a new feature to one of your editable layers.



There are several different *tools* you can use to make edits in ArcMap. I'll bet your two most favorite tools will be the *Edit* Tool, which lets you select features to use as a sketch, and the *Sketch* Tool, which lets you draw freehand points, lines or polygons. These are the tools pictured above. Other tools, available when you click the arrow next to the pencil, include the *Trace* Tool, which lets you create lines by tracing other lines in existing features, and the *Arc* Tool, which lets you create your sketch with circular lines.

There are also many *tasks* to choose from. As with tools though, I think you'll have a few favorites. Certainly on the top of your list will be *Create New Feature*. This task does just what it says. Other tasks include *Cut Polygon Features*, which uses the sketch you create to split selected polygon features, and *Reshape Feature*, which realigns the selected feature based on the new sketch.

The *target* layer is the easiest to understand, but the hardest to remember. The reason is that unlike ArcView 3.2, you can have several different layers editable all at once in ArcMap 8.x. In fact, any shapefile in the same folder as the one you are editing automatically becomes editable when you start editing. That's why it's important to make sure the shapefile (or geodatabase feature class) that you want to edit is selected in the *Target* box.

If you plan on doing some editing but aren't entirely comfortable with the tools yet, I recommend creating a dummy shapefile with the new extension mentioned above, and then playing with the various tools and tasks until you get the hang of it.